

GENERAL SESSION MINUTES MARKET SURVEILLANCE COMMITTEE MEETING March 18, 2011, 10:00 AM General Session Meeting Offices of the ISO, 250 Outcropping Way Folsom, CA 95630

A meeting of the Market Surveillance Committee (MSC) was held at the time and place referenced above, pursuant to the Public Notice (final released March 16, 2011), posted on the CAISO Web site at http://www.caiso.com/23c2/23c2c4412f6c0.html. This meeting was also a joint CAISO stakeholder meeting on topics contained in the Public Notice.

COMMITTEE MEMBERS ATTENDING

Frank Wolak	Committee Chairman
James Bushnell	Committee Member
Benjamin Hobbs	Committee Member
Absences:	None

GENERAL SESSION

The Director of Market Monitoring, Dr. Eric Hildebrandt, officially started the meeting shortly after 10:00 a.m., beginning with a quick run-down of the agenda.

The meeting was then turned over to Chairman Wolak, who thanked everyone for attending and introduced the two other committee members.

Public Comment

The meeting then proceeded with Chairman Wolak asking for public comment. Ed Charkowicz, of the CPUC, thanked the MSC for taking an in-depth look at the hourahead scheduling process's systemic pricing divergence between it and the real-time market. Mr. Charkowicz also went on to say that the CPUC strongly encourages the ISO to seriously consider making dramatic changes to the HASP and real-time market designs that significantly reduce or eliminate the unacceptable level of the ongoing real time imbalance energy offset charges.

The MSC thanked Mr. Charkowicz for his comment and stated they looked forward to further discussion on this topic later on during the day.

Market Surveillance Committee Meeting Minutes March 18, 2011 Page 1 of 4 Receiving no further comment, the MSC moved onto the next item on the agenda.

Decision on Minutes

Chairman Wolak then turned to the agenda item for MSC decision on the meeting minutes for the January 21, 2011, November 19, 2010, September 18, 2009, and May 7, 2008 MSC meetings. He noted that this item called for the members to review and approve the meeting minutes.

Jim Bushnell moved for the approval of the draft general session minutes from January 21, 2011, November 19, 2010, September 18, 2009 and May 7, 2008. The motion was seconded by Benjamin Hobbs, and approved:

Yes: 3 No: 0

Discussion on Phase I Renewable Integration Issues

Gillian Biedler, Senior Market Design & Policy Specialist, introduced the first discussion by reminding the MSC of the rationale for changing the bid floor from –\$30/MWh to -\$300/MWH. The current bid floor did not contemplate the effect of today's renewable incentives. Biedler also explained how the derivation of the new proposed amount. The ISO started with -\$30/MWh and tried to figure out the other opportunity costs associated with curtailing. They looked at production tax credits, renewable energy credits and listened to stakeholders. Ms. Biedler went on to say that the bid floor is more like a backstop and not meant to truncate bids.

Next, Dr. Wolak's presentation focused on the arguments to setting the offer floor.

Dr. Benjamin Hobbs, MSC member, provided the next presentation. Dr. Hobbs spoke to the problem of renewable energy policies creating incentives to variable energy sources to bid far below their marginal costs. Dr. Hobbs believes that this problem has some distorting effects on the market, including higher costs and potentially higher pollution emissions, and that these effects will worsen in the future. In his presentation, Dr. Hobbs questioned the basic regulatory policy framework behind it.

Dr. Hobbs went on to say that renewable subsidies that incent renewable generation during periods of negative prices serve no valid policy purpose and distort the market and should be changed.

Bid Cost Recovery Refinements

Introducing the next topic, Ms. Biedler provided a brief update on the bid cost recovery proposal. As part of the revised straw proposal, the ISO put out a change to the bid cost recovery netting. The ISO proposed to split the netting so day-ahead is split between real-time.

Dr. Hobbs provided a brief presentation on the theoretical economic background for bid cost recovery. According to Dr. Hobbs, bid cost recovery is needed for the efficient Market Surveillance Committee Meeting Minutes March 18, 2011 Page 2 of 4

operation of the market and that the economic justification for bid cost recovery is to provide incentive for least-cost producers to participate in the market. In particular, the goal is to provide "supporting prices" for resource schedules. Dr. Hobbs went on to discuss the implications of the theory and concluded his presentation by noting that moving to separate day-ahead and real-time bid cost recovery seems reasonable. Finally, bid cost recovery seems to be providing some incentive problems that are worth examining.

This agenda item was a discussion item only and did not require any action be taken by the MSC.

Update on Convergence Bidding Performance

Dr. Eric Hildebrandt, Director of Market Monitoring, provided the MSC with a brief update on convergence bidding since going live. According to Dr. Hildebrandt, real-time prices have continued to be systematically higher than hour-ahead prices and price convergence has been improving during peak hours.

Discussion on Real-Time Imbalance Offset

Seeking the MSC's input, Margaret Miller, Manager of Market Design and Regulatory Policy, provided the next presentation, which focused on the real-time imbalance offset. Providing some history on this issue, Ms. Miller reminded the audience that the concern for the real-time imbalance charge goes back to 2009 – when during the stakeholder process, no new allocation method was developed. In 2009, the ISO shifted the focus towards improving the convergence of prices between the HASP and real-time. Seeing an upward trend in offset charges, the ISO feels it is time to reconsider this issue. To mitigate the problem, Ms. Miller laid out two short term options: 1) a change to the allocation methodology combined with continued efforts to converge prices, 2) impose more aggressive measures to reduce uplift and address price convergence or, as a long term option for consideration, provide more extensive market design changes such as a 15 minute market or full hour-ahead market.

Market participants expressed their concern and felt this is a problem that needs to be addressed. Ms. Miller agreed with the stakeholders and acknowledged the need for more analysis.

This agenda item was a discussion item only and did not require any action be taken by the MSC.

Discussion on Flexible Ramping Constraint

Next Ellen Wolfe, on behalf of Western Power Trading Forum provided the MSC with two presentations. One presentation focused on the flexible ramping constraint and the other presentation focused on the intertie constraints issue.

This agenda item was a discussion item only and did not require any action be taken by the MSC.

Recognition of Dr. Frank Wolak

Market Surveillance Committee Meeting Minutes March 18, 2011 Page 3 of 4 Following Ms. Wolf's presentation, the committee approved a resolution thanking him for his leadership during the energy crisis and the design and implementation of the ISO's new market. Dr. Wolak thanked both committee members and stakeholders. Wolak stated that he appreciated the opportunity to learn from Stakeholders, Market Product and Development Department, and the Department of Market Monitoring.

Dr. Hildebrandt then spoke on behalf of Market Monitoring and ISO management and his predecessors. Hildebrandt reminded us that Dr. Wolak was Chairman before start-up and was the founding member of the market surveillance team. Dr. Anjali Sheffrin and Wolak were pioneers in the field and developed one of the first models in the country for an MSC. Dr. Wolak also had the ability to get involved in the market design. Finally, Wolak served as an important ISO advocate for the California energy market. He played a key role in convincing people to have continued faith in the ISO and the markets and played a key role in getting us where we are today with the new market design. Dr. Hildebrandt then presented Dr. Wolak with a plaque honoring his long time service.

The meeting was then open for informal comments from stakeholders and ISO staff: Colette Kersten of the CPUC, Maury Kruth of FERC, Sidney Davies of the ISO, Karen Koyano of Southern California Edison, and Ellen Wolfe of Resero Consulting all thanked Wolak for his service and hard work.

The meeting concluded with Ellen Wolfe leading the audience in musical tribute to Frank Wolak.

Adjourned

There being no additional general session items to discuss, the Market Surveillance Committee meeting was adjourned at approximately 4:00 p.m.

The MSC has approved these Minutes of the March 18, 2011, MSC Meeting at the following MSC Meeting:

Date of approval: July 1, 2011